What is claimed is:

1. A $12CaO \cdot 7Al_2O_3$ compound comprising an O_2^- ion radical and/or an O^- ion radical serving as active oxygen species, said ion radical being clathrated in said compound in a concentration of 10^{20} cm^{-3} or more.

2. A method for producing a $12CaO \cdot 7Al_2O_3$ compound comprising the steps of:

preparing a raw material including calcium (Ca) and aluminum (Al) mixed with each other in an atomic equivalent ratio of 12 : 14; and

reacting said raw material in a solid phase reaction at a sintering temperature ranging between 1200℃ or more and less than 1415℃, under a dry oxidization atmosphere with an oxygen partial pressure of 10^4 Pa or more and a water-vapor partial pressure of 10^2 Pa or less.

3. A method as defined in claim 2, wherein said raw material includes a calcium component selected from the group consisting of calcium carbonate, calcium hydroxide and calcium oxide, and an aluminum component selected from the group consisting of aluminum oxide and aluminum hydroxide.

4. A method for releasing an active oxygen species clathrated in the $12CaO \cdot 7Al_2O_3$ compound as defined in claim 1, characterized by subjecting said $12CaO \cdot 7Al_2O_3$ compound to a heat treatment at a temperature of 1200℃ or more under an atmosphere

with an oxygen partial pressure of less than 10^4 Pa or a water-vapor partial pressure of 10^2 Pa or more.

5. A method for quantitatively analyzing the O_2^- ion radical clathrated in the $12CaO \cdot 7Al_2O_3$ compound as defined in claim 1, characterized in that said O_2^- ion radical is analyzed based on a scattering intensity arising from said O_2^- ion radical around a Raman shift of 1128 cm^{-1}.

6. A method for quantitatively analyzing the O_2^- ion radical and O^- ion radical each clathrated in the $12CaO \cdot 7Al_2O_3$ compound as defined in claim 1, characterized in that said O_2^- ion radical and said O^- ion radical are analyzed based on a first electron spin resonance absorption intensity defined by gx = 2.00, gy = 2.01 and gz = 2.04, and a second electron spin resonance absorption intensity defined by gx = gy = 2.05 and gz = 2.00, respectively.

7. An oxidization catalyst comprising a $12CaO \cdot 7Al_2O_3$ compound including an O_2^- ion radical and/or an O^- ion radical serving as active oxygen species, said ion radical being clathrated in said compound in a concentration of 10^{20} cm^{-3} or more.

8. An antibacterial agent comprising a $12CaO \cdot 7Al_2O_3$ compound including an O_2^- ion radical and/or an O^- ion radical serving as active oxygen species, said ion radical being clathrated in said compound in a concentration of 10^{20} cm^{-3} or more.

9. An ion conductor comprising a $12CaO \cdot 7Al_2O_3$ compound including an O_2^- ion radical and/or an O^- ion radical serving as active oxygen species, said ion radical being clathrated in said compound in a concentration of 10^{20} cm^{-3} or more.

10. An electrode material for solid-oxide fuel cells, comprising a $12CaO \cdot 7Al_2O_3$ compound including an O_2^- ion radical and/or an O^- ion radical serving as active oxygen species, said ion radical being clathrated in said compound in a concentration of 10^{20} cm^{-3} or more.